

REMARKS/ARGUMENTS

The Office Action mailed July 26, 2004 has been reviewed and carefully considered. Claims 1, 7, and 14 are amended. Claims 1-20 are pending in this application, with claims 1 and 14 being the only independent claims. Reconsideration of the above-identified application in view of the amendments and the following remarks is respectfully requested.

In the Office Action mailed July 26, 2004, claims 1-20 stand rejected under 35 U.S.C. §103 as unpatentable over U.S. Patent No. 6,681,099 (Keranen) in view of U.S. Patent No. 6,052,363 (Koch).

Before discussing the cited prior art and the Examiner's rejections of the claims in view of that art, a brief summary of the present invention is appropriate. The present invention relates to a network based system and method for determining a location of a User Equipment (UE) in CDMA networks. According to the present invention, a request is made for determining UE location (page 6, lines 8-10). In response, a Radio Network (RNC) determines a value of the transmission timing difference of the UE (page 6, line 14-16). A Round Trip Time (RTT) is then measured for connected transceiver node in active communication with the UE (page 6, lines 14-16). After that, the RTT is determined for at least one other transceiver which is not in active communication with the UE (page 6, lines 16-17 and page 11, line 19 to page 12, line 3). When the distance of the UE from the connected node and at least two other node is determined, the positions of all three nodes are known and the position of the UE may be determined, for example by calculating the intersection of circles around the three known locations, where the radii of the circles are the distance from the respective transceiver nodes (page 12, lines 3-7).

Independent claim 1 has been amended to clarify that the other transceiver nodes are not in active communication with the User Equipment and now recites step (c) of "measuring a

round trip time of a radio signal between at least one other transceiver node and the user equipment, wherein the at least one other transceiver node is not in active communication with the user equipment". Dependent claim 7 has also been amended to be consistent with independent claim 1. Independent claim 14 is similarly amended and recites means for "determining a round trip time between the user equipment and at least one other non-connected transceiver node which is not in active communication with the user equipment".

It is respectfully submitted that independent claims 1 and 14 are allowable over Keranen and Koch because (1) there is no motivation for combining the references and (2) even if they were combined, neither Keranen nor Koch discloses determining or measuring a round trip time between the user equipment and at least one other non-connected transceiver node which is not in active communication with the user equipment, as recited in independent claims 1 and 14.

Regarding the first reason, "[I]n determining the propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the reference before him to make the proposed substitution, combination, or other modification." *In re Linter*, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972). Keranen relates to a method for calculating true round trip propagation delay and user equipment location in WCDMA/UTRAN. Koch relates to a method for causal ordering in a distributed network. In a causally ordered network, when a node receives a message, before the node responds to the message it must be certain that it will not receive any other message from any other node that causally proceeds that message (col. 1, lines 26-29 of Koch). The goal of Koch is to provide a system and method that addresses the problem of allowing a node in a causally ordered network to respond as quickly as possible while still being assured that the response is causally ordered (col. 2, lines 3-13).

Accordingly, one skilled in the art of wireless communication would not be motivated to combine a system or method for causal ordering with the system of Keranen for determining a location of a user equipment.

Regarding the second reason, the Office Action states that Keranen fails to teach or suggest determining or measuring a round trip time between the user equipment and at least one other non-connected transceiver node which is not in active communication with the user equipment, as recited in independent claims 1 and 14. Even if the teachings of Koch were combined with Keranen, the combination still fails to teach or suggest this limitation. As stated above, Koch relates to causally ordered networks and discloses a simplified network 10 having nodes A, B, C, D, and E (see col. 2, line 65 to col. 3, line 1). Each of the nodes includes channels for sending and receiving to different nodes (col. 3, lines 1-19). More specifically, each node includes several first-in-first-out (FIFO) channels that support interconnection and are represented by directed paths (i,j) wherein i refers to the node sending the message and j refers to the node receiving the message (col. 3, lines 1-7). Accordingly, each of the nodes includes a set number of channels senders and receivers. Koch discloses that node A includes senders and receivers 10-15 for interconnecting the nodes (col. 3, lines 12-22). Some of the nodes in the distributed network of Koch are not directly connected to each other, such as nodes A and C and nodes E and C (col. 3, lines 19-22).

Since each node of system disclosed by Koch includes receivers and senders for specific paths in the network, the nodes of Koch are network nodes and can not be considered to be the claimed user equipment. Therefore, the disclosure of Koch relates to paths between permanent nodes of a distributed network and the present claimed invention relates to communication between a transceiver node and a user equipment in a wireless network. Accordingly, Koch fails to disclose

"measuring a round trip time of a radio signal between at least one other transceiver node and the user equipment", as recited in independent claims 1 and 14.

The present invention is amended to clarify that the "not-connected node" is a node that is not in active communication with the user equipment. In contrast, when Koch refers to "non-connected nodes", Koch refers to nodes that are not connected by a direct path such as nodes A and C and nodes E and C (see, e.g., col. 3, lines 19-22; and col. 4, lines 2-6). However, this does not mean that, e.g., nodes A and C are not in active communication. Accordingly, Koch also fails to disclose, "wherein the at least one other transceiver node is not in active communication with the user equipment", as recited in independent claims 1 and 14.

In view of the above remarks, it is respectfully submitted that independent claims 1 and 14 are allowable over Keranen in view of Koch.

Dependent claims 2-13 and 15-20, each being dependent on one of independent claims 1 and 14, are deemed allowable for at least the same reasons expressed above with respect to independent claims 1 and 14.

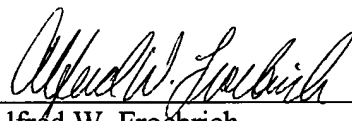
Dependent claim 6 and dependent claim 15 recite that measuring or determining a round trip time of a radio signal between at least one other transceiver node and the user equipment includes "comparing a time-of-arrival of an uplink transmission from said UE at the non-connected transceiver nodes to the time-of-arrival of the uplink transmission at the connected transceiver node". In contrast, Koch discloses that when nodes are not directly connected, Koch determines the latencies of existing paths that can deliver a message between the nodes that are not directly connected (see col. 4, lines 2-6). Accordingly, dependent claims 6 and 15 are allowable over Keranen and Koch for at least these additional reasons.

The application is now deemed to be in condition for allowance and notice to that effect is solicited.

It is believed that no fees or charges are required at this time in connection with the present application. However, if any fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,

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